



Australian Bureau of Statistics

6262.0 - Information Paper: Regional Labour Force Statistics, 2014

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Summary

Main Features

INTRODUCTION

The Australian Bureau of Statistics (ABS) introduced a new geographical classification, the Australian Statistical Geography Standard (ASGS), on 1 July 2011 prior to conducting the 2011 Census of Population and Housing. The new geography standard has been designed to provide users with statistical regions that are more stable over time, consistent in size, more detailed, better representative of underlying settlement patterns and socio-economic relationships, and encompassed in a single framework. In addition, the ASGS is adaptable because, as population regions grow, consistency can be maintained with previous regions (i.e. a growing region may be split in two).

In the Labour Force Survey (LFS) geography is used to define areas from which households are selected and to disseminate regional statistics. The ABS redesigns Labour Force regions after each Census and, following the 2011 Census of Population and Housing, introduced the new geographic standard, the ASGS into the sample design. From 20 February 2014 the ABS will release Labour Force regional statistics using the new geographical classification. This paper describes the introduction of the new geographical standard and should be read by all people who use regional estimates from the LFS.

USE OF GEOGRAPHY IN THE LFS

The 2011 LFS sample design introduced the ASGS, which replaces the previously used Australian Standard Geographical Classification (ASGC). The ASGS was introduced into the LFS sample design from May 2013 to August 2013. Mesh block boundaries from the ASGS were used to create the sampling areas from which groups of dwellings are selected in the LFS. The mesh blocks replaced Census Collection Districts used under the previous standard. The mesh block boundaries are a disaggregation of Statistical Areas Level 4 (SA4)s.

SA4s will be used for the dissemination of regional estimates, replacing Labour Force Regions. The dissemination of Labour Force estimates on an ASGS basis has been designed to coincide with the publication of LFS estimates rebenchmarked back to July 1991 to align with the 2011 Census based Estimated Resident Population. The rebenchmarked estimates will initially be published with the January 2014 Labour Force estimates released on 13 February 2014 in Labour Force, Australia (cat. no. 6202.0). The regional estimates will be subsequently released on 20 February 2014 in the monthly release of Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001), and on 20 March 2014 in the quarterly release of Labour Force, Australia, Detailed, Quarterly (cat. no. 6291.0.55.003).

For more information on rebenchmarking, see the 'Rebenchmarking of Labour Force Series'

article in Labour Force, Australia, November 2012 (cat. no. 6202.0).

By itself the introduction of the ASGS would not result in revisions to the level of national and state / territory level Labour Force estimates. However, the national and state / territory level estimates will be revised back to July 1991 due to the rebenchmarking to align with the 2011 Census based Estimated Resident Population.

Despite the LFS sample being selected entirely from an ASGS-based design since August 2013, the ABS will continue to release estimates on an ASGC basis until the December 2013 issue. From the January 2014 issue, estimates will no longer be released or available according to the previous standard, ASGC.

Under the ASGS, there will be 87 SA4s utilised to publish Labour Force estimates. With the previous standard, ASGC, Labour Force estimates were published for 69 Labour Force Regions. To assist clients in understanding the implications of the ASGS being introduced, the following are available:

- A concordance from Labour Force Regions (2007) to SA4s (2011), titled *Labour Force Regions 2007 to Statistical Area Level 4 2011*, is available from the Downloads tab of Australian Statistical Geography Standard (ASGS): Correspondences, July 2011 (cat. no. 1270.0.55.006).
- Digital boundary files for Labour Force Regions are available from the Downloads tab of this publication.
- Digital boundary files for SA4s are available from the Downloads tab of Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011 (cat. no. 1270.0.55.001).
- Maps of the Labour Force Region boundaries are available in PDF files from the Downloads tab of Australian Labour Market Statistics, Jul 2009 (cat. no. 6105.0).

SA4s have been designed under the ASGS for the output of Labour Force estimates. SA4s are built from whole SA3s and are designed to reflect labour markets in each State and Territory within the population limits imposed by the size of the Labour Force Survey sample. For more details see Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011 (cat. no. 1270.0.55.001).

The ASGS also introduces Greater Capital City Statistical Areas (GCCSA)s which are geographical areas designed to represent the functional extent of each of the eight state and territory capital cities. They replace Capital City Statistical Divisions. More information about the GCCSAs, including maps of the differences in area between the GCCSAs and the Capital City Statistical Divisions, can be found in the Greater Capital City Statistical Area - Fact Sheet available on the ABS Geography portal: <https://www.abs.gov.au/geography>.

Labour Force estimates will be published using ASGS regions from the January 2014 issue onwards and will be backcast to October 1998. Estimates have been backcast by determining from which SA4 each survey respondent would have been sampled, had the ASGS been the geographical standard used for past LFS sample designs. Backcasting Labour Force estimates by SA4s enables a consistent time series of regional estimates to be published. However, because previous Labour Force Survey samples were designed using the ASGC rather than the ASGS, the creation of a consistent regional times series has had a slight impact on the quality of historical Labour Force estimates. Analysis determined that there was a small increase, on average, for estimated relative standard errors for both employment and unemployment estimates at the national level. The estimated relative standard errors on Labour Force estimates based on the 2011 sample design (estimates from the August 2013 issue onwards) are not affected by the backcasting and remain

unchanged from those discussed in Information Paper: Labour Force Survey Sample Design, May 2013 (cat. no. 6269.0).

SURVEY OBJECTIVES AND THE QUALITY OF REGIONAL ESTIMATES

The purpose of the monthly Labour Force Survey is to provide timely information on the labour market activity of the usually resident civilian population of Australia aged 15 years and over. The statistics of most interest each month are the national and state and territory estimates of the number of employed and unemployed people, the unemployment rate and the labour force participation rate. The rate of change in the number of people employed is a key indicator of economic growth. The unemployment rate (the percentage of persons in the labour force who are unemployed) is a key measure of unutilised labour, and the participation rate (the percentage of the population in the labour force) reflects changes in total labour availability.

The LFS is designed to provide accurate national, state and territory estimates. However, estimates for a number of regions within states can be produced from the LFS at a lower level of statistical quality. From 20 February 2014, a range of Labour Force estimates will be available by sub-state regions including GCCSAs and SA4s.

As with state and national estimates, regional Labour Force estimates are subject to sampling error. Compared with estimates at the state and territory level, estimates for regions are based on smaller samples and are subject to higher relative standard errors.

Standard errors for Labour Force estimates for each SA4 will be available in Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001) on 20 February 2014 one week after the release of the main LFS estimates in Labour Force, Australia (cat. no. 6202.0) on 13 February 2014. Additional estimates of standard error for regions will be calculable using the spreadsheet published in Labour Force Survey Standard Errors, Data Cube (cat. no. 6298.0.55.001) when it is updated in 2014.

Since February 2004, regional Labour Force estimates have been produced using regional benchmarks to improve their quality. Despite this, care should be taken with the interpretation of regional estimates. The ABS recommends that:

- LFS regional estimates be used with caution due to the high degree of variability, particularly for the regions with smaller populations.
- Users calculate regional estimates as annual averages.

NORTHERN TERRITORY

Under the ASGS, the Northern Territory contains two areas at the GCCSA level. They are equivalent to the two Northern Territory SA4s: *Darwin* and *Northern Territory - Outback*. Under the ASGC, there was only one Labour Force Region in the Northern Territory. The LFS has insufficient sample in the Northern Territory for benchmarking to occur at the GCCSA level. Consequently, Labour Force estimates at the GCCSA level will not be produced or published for the Northern Territory. However, regional estimates will be produced and published for all state and territory ASGS SA4s from October 1998 onwards.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070, email client.services@abs.gov.au or Labour Force on Canberra (02) 6252 6525, email labourforce@abs.gov.au.

Regional Labour Force Products

REGIONAL LABOUR FORCE PRODUCTS

The format of regional Labour Force products (a spreadsheet and SuperTABLE data cubes) will be revised from February 2014 to accommodate the introduction of the ASGS. In all cases a longer time series has been added but, as a result of a review of the level of detail that can be released while maintaining ABS's obligations under the Census and Statistics Act (1905), some cross classifications have been removed.

For all products, Labour Force Regions will be replaced with Statistical Areas Level 4 (SA4)s. Additionally, the following changes will be made to the monthly release of Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001):

Spreadsheet 16 will be retitled "Labour Force Status by Region (SA4) and Sex". The spreadsheet will include a time series of original data backcast to October 1998.

Data cube RM1 will be retitled "Labour Force Status by Region (SA4) and Age, October 1998 onwards". The data cube will no longer include a full-time / part-time unemployment split. Age will be available by 10 year groupings with the time series backcast to October 1998.

Data cube RM2 will be retitled "Unemployed Persons by Region (SA4) and Duration of Unemployment Since Last Full-time Job, October 1998 onwards". The data cube will no longer include a sex classification nor a full-time / part-time unemployment split. The time series will be backcast to October 1998. The data cube will be discontinued in July 2014 when the Duration of Unemployment Since Last Full-time Job data item ceases to be collected in the Labour Force Survey.

Data cube RM3 will be retitled "Unemployed Persons by Region (SA4) and Duration of Job Search, April 2001 onwards". The data cube will no longer include a sex classification nor a full-time / part-time unemployment split. The time series will be backcast to April 2001.

The Duration of Job Search categories in data cubes RM2 and RM3 will provide further detail regarding short term unemployment and be more consistent with data published in data cube UM2.

In addition to replacing Labour Force Regions with SA4s, the following changes will be made to the quarterly release of Labour Force, Australia, Detailed, Quarterly (cat. no. 6291.0.55.003):

Data cube RQ1 will be retitled "Employed Persons by Region (SA4) and Industry, October 1998 onwards, four quarter rolling averages". The data will continue to be presented quarterly but each quarter will be an average of that quarter and the preceding three quarters. The time series will be backcast to the 1999-2000 financial year.

Data cube RQ2 will be retitled "Employed Persons by Region (SA4) and Occupation, October 1998 onwards, four quarter rolling averages". The data will continue to be presented quarterly but each quarter will be an average of that quarter and the preceding three quarters. The time series will be backcast to the 1999-2000 financial year.

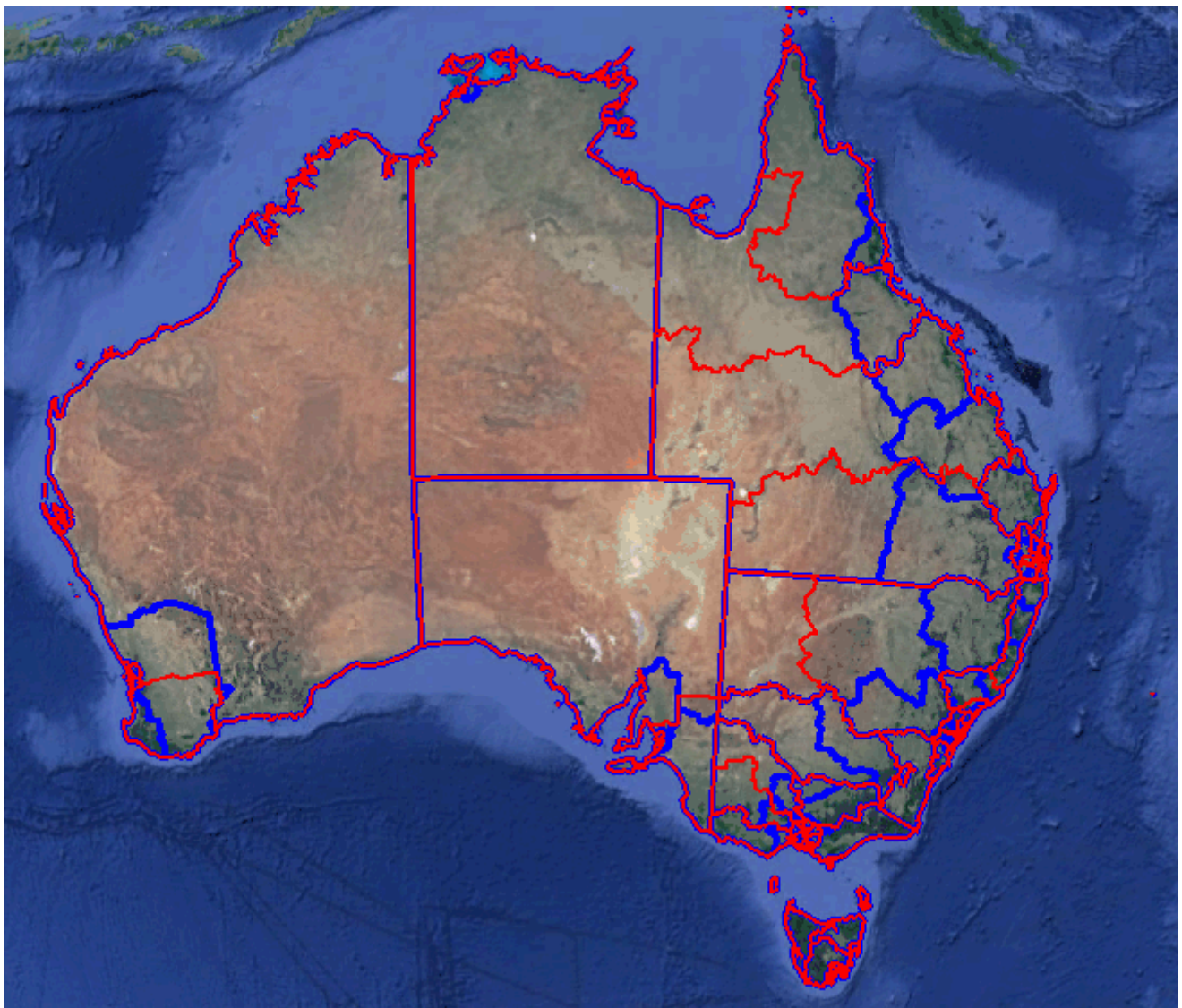
Templates of the above products will be added to the Downloads tab of Labour Force,

Viewing the geographical boundaries with Google Earth®

Viewing the geographical boundaries with Google Earth®

1. Download and install the free Google Earth® software (minimum system requirements are available on the Google Earth® download page).
2. Download the digital boundaries KMZ file from the Downloads tab of this publication.
(Note: the KMZ file has a .ZIP extension)
3. Unzip the file to your preferred location.
4. Launch Google Earth® and choose Open from the File menu.
5. Locate the digital boundaries KMZ file and select Open.

The boundaries of both the Labour Force Regions (2007) and Statistical Areas Level 4 (2011) will be overlaid on satellite imagery of Australia, similar to the below;



The map can be navigated using a mouse or keyboard to visualise the boundaries more closely. Please note that the KML/KMZ files hold boundary data that has been simplified to

increase performance within Google Earth. They are only suitable for visualisation purposes. The official detailed definition of the Labour Force Region boundaries are available from the Downloads tab of this publication and for Statistical Areas Level 4 are available from the Downloads tab of Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011 (cat. no. 1270.0.55.001).

About this Release

This paper describes changes to become effective in February 2014 to the regional boundaries used in the dissemination of labour force statistics derived from the monthly Labour Force Survey (LFS). The paper also provides general information on the quality of labour force statistics for those dissemination regions.

History of Changes

This document was added or updated on 23/01/2014.

16/01/2014 - The wording of the Regional Labour Force Products page was edited to reflect the following changes: the sex classification will continue to be included in data cubes RM1, RQ1 and RQ2; data cubes RQ1 and RQ2 will be presented each quarter as a four quarter rolling average instead of annually as a financial year average; and the Duration of Job Search categories in data cubes RM2 and RM3 will provide further detail regarding short term unemployment and be more consistent with data published in data cube UM2.

Explanatory Notes

Metadata for digital boundary files - Labour Force Regions 2007

METADATA FOR DIGITAL BOUNDARY FILES - LABOUR FORCE REGIONS 2007

TITLE

Information Paper: Regional Labour Force Statistics (cat. no. 6262.0)

Data Currency: July 2009

Presentation Format: Digital boundaries

CUSTODIAN

Custodian: Australian Bureau of Statistics

DESCRIPTION

Abstract:

These boundaries reflect PDF maps that were released in conjunction with the 3 July 2009 issue of Australian Labour Market Statistics (cat. no. 6105.0). They represent the new Labour Force Sample design which was implemented between November 2007 and June 2008. The Labour Force boundaries are aggregations of Statistical Local Areas (SLAs) from the 2006 edition of the Australian Standard Geographical Classification (ASGC).

File Nomenclature:

File names have the format <file type>_<2007>_<AUST> where:

<file type> represents the type of boundaries in each file
LFR = Labour Force Region

<2007> represents 2007 the year of the new Labour Force Sample design

<AUST> indicates the data covers all of Australia as defined in the ASGS Volume 1.

Within the files, the States and Territories are identified by unique one digit codes, as listed below:

State and Territory Codes and Names

Code	State or Territory
1	New South Wales
2	Victoria
3	Queensland
4	South Australia
5	Western Australia
6	Tasmania
7	Northern Territory
8	Australian Capital Territory
9	Other Territories

File Attributes:

The table shows file type, file name, spatial unit field and the data type.

File Type: Labour Force Region (LFR)

File Name (s): LFR_2007_AUST

Field Attributes

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
1	LFR_CODE_2007	LF_CODE07	Character(8)

2	LFR_NAME_2007	IL_NAME07	Character(50)
3	STATE_CODE_2006	STE_CODE07	Character(1)
4	STATE_NAME_2006	STE_NAME07	Character(30)
5	AREA_ALBERS_SQKM	AREA_SQKM	Float

DATA CURRENCY

Date of Effect: July 2009

DATASET STATUS

Progress: Completed dataset

Maintenance and Update Frequency: There are no current plans for updates to these ASGC-based boundaries. In future ASGS Statistical Areas Level 4 will be used as labour force geographic regions. Information Paper: Regional Labour Force Statistics (cat. no. 6262.0) describes these changes.

ACCESS

Stored Data Format:

The digital boundary files are in MapInfo Interchange Format (.MID .MIF) and ESRI Shapefile (.shp) format.

MapInfo Interchange Format can be imported directly into MapInfo and other common Geographic Information Systems (GIS) or desktop mapping packages. The .MID .MIF files are text format and can be edited and manipulated for import to less common GIS and CAD systems.

The .MID .MIF files cannot be used directly with viewing tools such as MapInfo ProViewer.

Access Constraints:

Copyright Commonwealth of Australia administered by the ABS.

Datum:

Geocentric Datum of Australia 1994 (GDA94)

The digital boundary files have the datum specified as 116 (GDA94). Users of MapInfo 6.0 or later are able to load data sets based on GDA94 directly, without transformation. Earlier versions of MapInfo cannot interpret GDA94 correctly and there may be alignment problems between data sets based on this datum and other earlier datums.

Projection:

Geographical (i.e. Latitudes and Longitudes)

Geographic Extent:

Geographic Australia.

DATA QUALITY

Lineage:

Collection Districts (CDs) are the building blocks of the SLA regions used in turn to build Labour Force Regions. CD boundaries were created using digital topographic datasets from the PSMA.

Positional Accuracy:

Positional accuracy is an assessment of the closeness of the location of the spatial objects in relation to their true positions on the earth's surface.

The positional accuracy includes:

- a horizontal accuracy assessment
- a vertical accuracy assessment

Positional accuracy for ABS boundaries is dependent on the accuracy of the features they have been aligned to. ABS boundaries are aligned to a number of layers supplied by PSMA with an accuracy of +/-50 mm.

PSMA layers and their positional accuracy are as follows:

- Transport and Topography
+/- 2 meters in urban areas and +/- 10 meters in rural and remote areas
- CadLite
+/- 2 meters in urban areas and +/- 10 meters in rural and remote areas
- Administrative Boundaries
Derived from the cadastre data from each Australian State and Territory jurisdiction
- Greenspace and Hydrology
Relative spatial accuracy of these themes reflects that of the jurisdictional source data. The accuracy is +/- 2 metres in urban areas and +/- 10 metres in rural and remote areas.

Attribute Accuracy:

All codes and labels for the Labour Force Region 2007 structure are fully validated.

Logical Consistency:

Spatial units are closed polygons. Attribute records without spatial objects have been included in the data for administrative purposes.

Completeness:

All regions of the Labour Force Regions 2007 are represented. For completeness the Other

Territories (Jervis Bay Territory, Christmas Island, Cocos (Keeling) Islands) are included as boundaries. Other Territories are not included in Labour Force samples.

CONTACT INFORMATION

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Abbreviations

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ASGC	Australian Standard Geographical Classification
ASGS	Australian Statistical Geography Standard
CD	Collection District
GCCSA	Greater Capital City Statistical Areas
GDA94	Geocentric Datum of Australia 1994
GIS	Geographic Information Systems
LFR	Labour Force Region
LFS	Labour Force Survey
SA4	Statistical Area Level 4
SLA	Statistical Local Area

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